

Abstract

A photo-induced phase transition organic material is composed of a diheteroarylethene-based compound within which the photochromic reaction occurs in the crystalline state. The diheteroarylethene-based compound of the present invention reversibly changes in color with light irradiation and also changes in phase from the open-ring form in the crystalline state to the closed-ring form in the crystalline state, or from the closed-ring form in the crystalline state to the open-ring form in the crystalline state via the liquid state, and can be applicable to optical recording media, display panels, sensors, optical switch devices and the like, by taking advantages of its variations in color with light irradiation and also its changes in physical property, such as the refractive index and the permeability, with its changes in phase.